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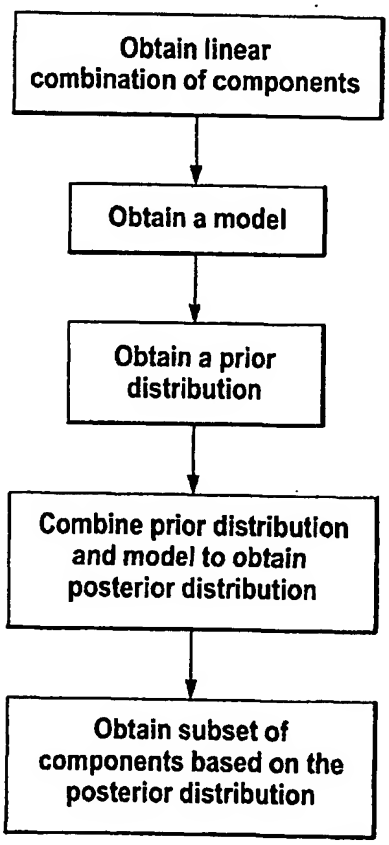
(54) Title: A METHOD FOR IDENTIFYING A SUBSET OF COMPONENTS OF A SYSTEM



(57) Abstract: A method of identifying a subset of components of a system based on data obtained from the system using at least one training sample from the system, the method comprising the steps of: obtaining a linear combination of components of the system and weightings of the linear combination of components, the weightings having values based on data obtained from the at least one training sample, the at least one training sample having a known feature; obtaining a model of a probability distribution of the known feature, wherein the model is conditional on the linear combination of components; obtaining a prior distribution for the weighting of the linear combination of the components, the prior distribution comprising a hyperprior having a high probability density close to zero, the hyperprior being such that it is not a Jeffreys hyperprior; combining the prior distribution and the model to generate a posterior distribution; and identifying the subset of components based on a set of the weightings that maximise the posterior distribution.

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